

Operational Durability: The Marines and Operational Maneuver from the Sea

A MONOGRAPH

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Current and proposed U.S. Marine Corps doctrine proclaims the many virtues of the Marines as an "expeditionary force in readiness." As America's "911 force," the Marine Corps is tasked to be the military force "most ready when the nation is least ready." A Ground Combat Element (GCE) combined with an organic Aviation Combat Element (ACE) and a Combat Service Support Element (CSSE) provides a potent military force, rapidly deployable anywhere in the world. Capable of operating at the tactical and operational levels of war, the Marine Corps undoubtedly contributes significantly to the total force projection capability of the United States. Operating independently, however, the ability of the Marines to project combat power over time, space and depth may be limited. The nation maintains a requirement for an operationally durable force. Operational durability is the sustainability of an operational force throughout the entire depth and breadth of the theater of operations for an indefinite period of time. Operational durability consists of four elements. These are time, depth and breadth, sustainability, and the moral and material forces of a country. By analyzing the structure, doctrine (current and proposed), and the requirements that the nation has placed on the Marine Corps against operational durability criteria, a determination can be made as to whether or not the Marine Corps is an operationally durable force. This analysis concludes that both in current and proposed doctrine the MEU (SOC) and the MEB are arguably not operationally durable. Under current and proposed doctrine the MEF is operationally durable. The results of this monograph have applicability to the development of the U.S. Army's Interim Brigade Combat Team (IBCT) concept. As a rapidly deploying force, the IBCT presents a formidable, flexible force that is tactically significant. But is the IBCT operationally durable?

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Abstract

Current and proposed U.S. Marine Corps doctrine proclaims the many virtues of the Marines as an "expeditionary force in readiness." As America's "911 force," the Marine Corps is tasked to be the military force "most ready when the nation is least ready." A Ground Combat Element (GCE) combined with an organic Aviation Combat Element (ACE) and a Combat Service Support Element (CSSE) provides a potent military force, rapidly deployable anywhere in the world.

Capable of operating at the tactical and operational levels of war, the Marine Corps undoubtedly contributes significantly to the total force projection capability of the United States. Operating independently, however, the ability of the Marines to project combat power over time, space and depth may be limited.

The nation maintains a requirement for an operationally durable force. Operational durability is the sustainability of an operational force throughout the entire depth and breadth of the theater of operations for an indefinite period of time. Operational durability consists of four elements. These are time, depth and breadth, sustainability, and the moral and material forces of a country.

By analyzing the structure, doctrine (current and proposed), and the requirements that the nation has placed on the Marine Corps against operational durability criteria, a determination can be made as to whether or not the Marine Corps is an operationally durable force. This analysis concludes that both in current and proposed doctrine the MEU (SOC) and the MEB are arguably not operationally durable. Under current and proposed doctrine the MEF is operationally durable.

The results of this monograph have applicability to the development of the U.S. Army's Interim Brigade Combat Team (IBCT) concept. As a rapidly deploying force, the IBCT presents a formidable, flexible force that is tactically significant. But is the IBCT operationally durable?

Introduction

On January 1, 2001 the United States entered the twenty-first century. For the United States Marine Corps, planning for its role in the new millenium is a continual process. Preparation for change includes an assessment of national security needs which in turn determine the Marine Corps role supporting national defense requirements. The Marine Corps is an evolutionary organization, often anticipating future defense requirements before they are commonly recognized.¹ Currently the nation requires an expeditionary force in readiness that is capable of "...a ground and air striking force ready to suppress or contain international disturbances short of large scale war..."² The Marine Corps is one of the services providing that capability. Coupled with naval expeditionary operations, the Marine Corps provides a rapid, tailored crisis response capability anywhere in the world. Missions include forcible entry operations, peace enforcement, embassy evacuation, humanitarian assistance, and operations reinforcing or complementing other Services.³

There are three key expeditionary concepts defined by the Marine Corps. They include the capstone concept of Operational Maneuver from the Sea (OMFTS), and the supporting concepts of Military Operations Other Than War (MOOTW) and Sustained Operations Ashore.⁴ The Marine Corps recognizes that while maintaining a force in readiness with the versatility and flexibility to deal with situations of any intensity across the spectrum of conflict, it must operate in the three levels of war.⁵ These three levels of war are the strategic, operational and tactical levels. The ability to operate across the spectrum of conflict in these three levels of war requires an attribute known as durability.

The attribute of durability is directly linked to the ability of the Marines to project combat power over time, space and depth while operating independently. In some situations, a Marine Air Ground Task Force (MAGTF) commander's responsibilities will be focused at the operational level of war, while in other situations the focus will be largely tactical.⁶ In this regard the MAGTF commander will need forces that are both operational and tactically durable. Tactical durability is requisite for tactical mission accomplishment. The focus of this monograph, however, will be on the concept of operational durability. Specifically: Is the United States Marine Corps an operationally durable, significant force under current doctrine and the proposed new doctrine of OMFTS?

OPERATIONAL LEVEL OF WAR and OPERATIONAL ART

Assessing this question requires an understanding of the operational level of war as well as the concept of the operational art. The operational level of war is defined as "...the level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations."⁷ Operational art is defined as "...the employment of military forces to attain strategic and/or operational objectives through the design, organization, integration, and conduct of strategies, campaigns, major operations and battles."⁸ Using these concepts, this monograph first assesses the concept and development of the operational level of war and of the operational art. A determination is then made as to whether the Marine Corps currently operates at this level of war and subscribes to operational art theory. A similar determination is made with regard to the developing doctrine of OMFTS. The

requirement for, and definition of, operational durability is then established. Criteria for operational durability will be confirmed.

CURRENT USMC DOCTRINE and OMFTS

The current Marine Corps theory of war includes the strategy of annihilation, the strategy of incapacitation and the strategy of erosion.⁹ From this theoretical foundation, the Marine Corps has an established doctrine of attrition and maneuver warfare. The Marine Corps is currently developing new doctrine based on the evolving conditions of probable conflict. This new doctrine, termed OMFTS, establishes capabilities based on the future world environment, perceived threats, and enhanced twenty-first century technology. As the OMFTS doctrine is currently evolving, this monograph must define both the current and proposed doctrine. Once Marine Corps doctrine is defined, the analysis uses the established criteria for operational durability. This analysis considers both current and OMFTS doctrine and includes the three current MAGTF structures.

Upon completion of the analysis, conclusions are reached concerning the need for the Marine Corps as an operationally durable force and whether changes need to be made to current and future doctrine based on these findings. Additionally, a brief comparison is made against the framework of the proposed U.S. Army's rapidly deploying Interim Brigade Combat Team (IBCT) concept currently under development.

THE MAGTF

As a force-in-readiness the Marine Corps maintains a unique force structure. This force structure maximizes the combat potential and flexibility of the Marine Corps. The structure is founded in the requirement for the Marine Corps to be an expeditionary force (specifically part of a naval expeditionary force). As part of a naval expeditionary force,

the Marine Corps must retain the ability to rapidly tailor force size to meet the crisis requirement. The Marine Corps does this through the use of the Marine Air Ground Task Force (MAGTF).

Regardless of size, MAGTFs are balanced combined arms forces with organic command, ground, aviation, and sustainment elements.¹⁰ These four elements are referred to as the Command Element (CE), the Ground Combat Element (GCE), the Aviation Combat Element (ACE), and the Combat Service Support Element (CSSE). This structure, based around the four modules, lends itself to rapid easy tailoring. Each module can have forces added to it (or taken away) as the situation requires. The forces are simply added to (or taken away from) the existing core force structure within each module. Doctrinally the Marine Corps currently recognizes three basic MAGTFs.

The Marine Expeditionary Force (MEF) is the principal and largest MAGTF. This warfighting organization is particularly suited for larger crisis or contingencies. The MEF is capable of, "...missions across the range of military operations, including amphibious assault and sustained operations ashore in any environment."¹¹ Led by a lieutenant general, the MEF GCE is organized around a Marine division, the ACE around a Marine Aircraft Wing (MAW), and a Force Service Support Group (FSSG). The MEF can be as large as 46,000 Marines, and normally deploys with 60 days of sustainment. During Operation Desert Storm in 1991, I MEF included 1st and 2d Marine divisions, 1st and 2d FSSGs, 3d MAW comprised of elements of 1st and 2d MAWs, elements from Marine Forces Reserve (MARFORRES), and the U.S. Army's "Tiger" Brigade.¹² The Marine Corps currently maintains I MEF on the West Coast, II MEF along the East Coast and III MEF in Okinawa Japan.

The Marine Expeditionary Brigade (MEB) is a medium-sized expeditionary force. Led by a brigadier general, it is organized around a reinforced infantry regiment, reinforced aviation group, and Brigade Service Support Group (BSSG). MEB's are capable of amphibious assault and sustained operations ashore. The MEB has approximately 18,000 Marines and deploys with 30 days of sustainment.¹³

The Marine Expeditionary Unit (Special Operations Capable), (MEU(SOC)) is the standard forward-deployed expeditionary organization. The MEU(SOC) provides an immediate sea-based capability with which to meet national forward presence and power projection requirements. Commanded by a colonel, the MEU(SOC) is organized around a reinforced infantry battalion, a reinforced aviation squadron, and a Marine Service Support Group (MSSG). The MEU(SOC) has 2,200 Marines and deploys with 15 days of sustainment. By itself, the MEU(SOC) has a limited forcible entry capability.¹⁴ MEU(SOC)'s operate continuously in the Mediterranean Sea, the western Pacific Ocean, and the Indian Ocean or Arabian Gulf.¹⁵

In addition to the three MAGTFs described above, the Marine Corps maintain the ability to deploy a Special Purpose MAGTF (SPMAGTF). The SPMAGTF is a non-standing MAGTF that is temporarily formed to conduct a specific mission. They are formed when one of the other MAGTFs is unavailable or unnecessary. A SPMAGTF (SPMAGTF Somalia) was formed for operations in Somalia in 1994.¹⁶

A final Marine Corps capability of relevance to this analysis is the Maritime Prepositioning Forces (MPF). Central to the Marine Corps expeditionary capability, the MPF are organized around three maritime prepositioning ship squadrons. These ships maintain the supplies and equipment that are married up with Marines and Sailors flown

into the region. Each squadron consists of four or five multipurpose vessels. Maintained at strategic locations around the world these squadrons can steam to any crisis area within days. Each squadron contains the equipment necessary to support and sustain a MEB for 30 days.¹⁷ When combined together, the MPF squadrons have the capability to support one Marine division, one MAW, and one FSSG.¹⁸

The Marine Corps, through the deployment of the MAGTF maintains a significant combat and projection capability. Determining whether that capability is operationally durable involves an assessment of the operational level of war and the operational art.

Operational Art/Operational Durability

Formulating national strategy is both an art and a science. Through politics, the United States forms policy which determines national strategy. Using political, economic, military and psychological powers, the nation develops strategic objectives that define how the nation intends to pursue national strategy. These strategic objectives are the "ends" that must be achieved to promote, protect or attain national interests.¹⁹

For the United States military, the counterpart of national strategy is military strategy. Military strategy is "...the art and science of employing the armed forces of the nation to secure the objectives of national policy by the application of force, or the threat of force."²⁰ Military objectives are a consequence of strategic objectives. In a simple sense they are the military goals that lead to the accomplishment of strategic (political) goals.

To achieve its military strategy and objectives, the U.S. Armed Forces doctrinally recognize three levels of war. They are the strategic, operational and tactical levels of war. These three levels of war provide links between strategic (political) objectives and tactical (military) action. Specifically, the operational level of war serves establishes a "bridge" linking operational objectives to strategic and tactical objectives. The operational level of war is "...the level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations."²¹ Like the concepts of national and military strategy, the operational level of war is sufficiently complex to be best understood as both an art and a science. The applicable definition of art in the dictionary include "...a system of principles and methods employed in the performance of a set of activities..."²² Another relevant definition of art is "...the creative application of scientific knowledge through

judgment, experience and intuition to devise practical solutions."²³ This system of "principles and methods" for the operational level of war is operational art. The term operational art is a relatively recent (1986) addition to the U.S. Armed Forces' jargon. This recent formal definition of the term operational art signifies the importance and value of the operational art concept.

It is necessary to understand the concept of operational art in order to understand and define the concept of operational durability. Operational art is "...the employment of military forces to attain strategic and/or operational objectives through the design, organization, integration, and conduct of strategies, campaigns, major operations and battles."²⁴ Through operational art, the commander integrates activities across the three levels of war to accomplish military objectives which in turn facilitate the accomplishment of strategic objectives. Campaigns facilitate the accomplishment of strategic objectives while major operations and battles facilitate the accomplishment of operational and tactical objectives. A campaign is "...a related series of military operations aimed at accomplishing a strategic or operational objective within a given time and space."²⁵ It is important to understand that major operations and battles can vary in size.

Operational art determines the deployment of forces as well as the employment of forces in campaigns and major operations. The commander "visualizes" the military aspects of the operation and how military action will enable strategic success. The operational commanders "vision" is translated into an operational plan through a concept known as operational design.²⁶ Operational design assists in the planning, preparation, execution and assessment of the operation. The numerous elements of operational design

help the commander to focus on various aspects of the operation, and include concepts such as endstate, objectives, operational reach, and tempo.²⁷ Success also depends on how efficiently the commander utilizes the available resources. Time and space determine when, where, and for what purpose the commander will use his resources. These resources include the available military resources and can include the industrial and technological resources of the nation.

This modern concept of operational art had its genesis in the Soviet Union in the mid-1920's and early 1930's. Understanding these origins gives insight into understanding operational durability. Based on the Russian experience in World War I and in their Civil War, Soviet military officers sought to reassess thoroughly military doctrine. General-Major A.A. Svechin, one of the Academy's premier instructors, introduced the term operational art in a series of lectures given to the Military Academy in 1923-1924.²⁸ In his analysis and critique of existing strategic concepts, Svechin established the importance of operational art. Svechin recognized several key themes that he used to define his operational art concept. These themes included the establishment of a political-economic foundation beneath strategy, the division of strategy into two types (attrition and destruction), delineation of the operational art concept (which was an expansion on the concept of operations), the reduction of the role of combat, the denial of the importance of the single decisive engagement and the transformation of combat into an ongoing process, the radical reduction of the maneuver march as a major strategic factor, and the emphasis on the role of transportation and communications in strategy and the significance of technical-military superiority.²⁹ The points most significant to the concept of operational durability included the establishment of a political-economic

foundation beneath strategy, the division of strategy into attrition and destruction, the transformation of combat into an on-going process, and an emphasis on the role of transportation and communications in strategy (including the significance of military-technical superiority). Svechin's work on the operational art concept sparked interest among many of the Soviet military officers of the time.

Two other significant Soviet military officers enhanced Svechin's concept of operational art. V.K. Triandafillov and M.N. Tukhachevsky both contributed to the operational art concept. In fact, Triandafillov had served under Tukhachevsky in 1921.³⁰ In developing the concept they promoted discussion and published articles on the subject. Many other Soviet military officers participated in the discussion and development of the operational art concept. In the waning days prior to World War II, however, many of the military officers, including Tukhachevsky were executed during Stalin's purges. Triandafillov died in an airplane crash in 1931.

Triandafillov used Svechin's operational art concept in developing his construct of the role of the modern army. Specifically, his concern was for the future of the Soviet military. He is recognized for making significant contributions to Soviet deep battle theory, successive and deep operations.³¹ Triandafillov felt that future war would be protracted and would not be decided by one battle or campaign³². His theoretical treatise, The Nature of Operations of Modern Armies, published in 1929, was divided into two parts.

The first part of his work analyzed economic developments, socio-political shifts, and technological changes that would affect future military operations. Specifically, the first section of the part one discussed the state of modern armies (in two sections, tactical

survey and numerical strengths of mobilized armies) with regard to changes in technology (small arms, artillery, gas, tanks, and mechanization) and how change in these areas would affect future war.³³ The second section of part one presented his belief that in time of war modern nations would exercise "maximum mobilization capabilities." Supporting these efforts logistically raised two constraints that Triandafillov wrestled with. These were the quality of forces (tied to the level of training for sustained operations) and introduction of forces into theater (how to get and sustain large forces in the fight).

The second part of Triandafillov's work focused on the actual conduct of operations by modern armies. It was also divided into two parts. The first section of part two covered the single operation, and the second section of the second part covered successive operations. Triandafillov developed and presented the concept of the offensive shock army. The purpose of this army was to achieve sufficient force in order to break through prepared defenses and advance into the depths of the enemy position.³⁴ Realizing that one operation could not ensure strategic success, Triandafillov developed the notion of successive operations. Successive operations would be linked together in the campaign. Triandafillov believed that successive operations would "...achieve the decisive strategic goal set forth in the campaign."³⁵

Triandafillov's concept of operations and successive operations was based on his belief in the expanded size of modern armies and the greater dimensions of the future battlefield. Operations and successive operations would force the dispersion of troops throughout the depth and breadth the battlespace. This expansion would create requirements for more assets (people and military hardware). By expanding future

conflict in scope, Triandafillov also believed future conflicts would last longer.

Triandafillov recognized constraints with operational and strategic sustainment. In his view strategic logistics would become so important that even if disrupted in the face of limited resistance, operations could be compromised.³⁶

Tukhachevsky in 1929 expanded upon Triandafillov's concept of future war.

Tukhachevsky advocated a strategy of "destruction" whereby Soviet forces would conduct early decisive offensive operations that would shatter enemy forces through "deep operations and envelopments."³⁷ Mass, mechanization and revolutionary upheaval were key ingredients in Tukhachevsky's vision of future war. Tukhachevsky and Triandafillov's fundamental disagreement centered on the ability of the Soviet economy and industry to provide the technological impetus necessary for future war. Triandafillov felt that while emerging technology would be used, the country must be prepared for a sustained, protracted war. Tukhachevsky felt that the Soviet 5-year plan would provide the necessary vitality to thrust the Soviet Union into a position of superiority, allowing rapid, decisive victory.

Both Triandafillov and Tukhachevsky participated in the development of the operational art and deep battle concept. Many other Soviet military officers participated in the professional discussion that ensued. Ultimately the regularity of the prolonged operation was established in military thought. The actual possibility of conducting prolonged operations was directly dependent on the organization of material support for such operations.³⁸ Many other Soviet military theorists also recognized this recurring theme. N. Varfolomeyev brought up the concept of "operational exhaustion" related to the experiences in Russia along the eastern and southern fronts in 1919. He reinforced

his discussion with the concept of "material support" as identified in the 1920 military operation in Warsaw.³⁹ Others recognized the difficulties in establishing what a reasonable "operational depth" would be and how to sustain such an operation materially. Many also felt that the future war would be prolonged and would absorb the energies (politically and economically) of the opposing countries.⁴⁰

Triandafillov would eventually be recognized for his contribution to the development of the "deep campaign" theory. Tukhachevsky would expand on the deep campaign theory through the mid-1930's. Triandafillov recognized that initial and subsequent operations could eventually merge into a single, continuous protracted operation. This protracted operation combined with successive operations would be linked in time and space through the duration of a campaign.⁴¹ Logistics, sustainment, prolonged operations, resources, tempo, depth, breadth and duration were all recognized as important factors of Soviet operational art. Analysis of the U.S. Army's concept of operational art reveals many similarities to the Soviet concept of operational art.

General U.S. Grant's campaigns during the American Civil War are considered by many military theorists to be an example of the emerging concept operational art.⁴² An assessment of the Civil War provides additional clarification of the operational art concept. This further clarification ultimately leads to a discussion and definition of the operational durability concept. In its simplest form operational art is characterized by the employment of forces in deep distributed operations, and distributed campaigns. Other elements are required to support these forces, however these form the structure of operational art. Distributed operations are defined as "...an ensemble of deep maneuvers and distributed battles extended in space and time but unified by a common aim."⁴³

Central to the concept of distributed operations and campaigns is the aspect of operational maneuver. Operational maneuver is defined as "...relational movement in depth that maximizes freedom of action for the destruction of the enemy's capacity to wage war."⁴⁴ During the Civil War the common aim was the ability to retain or deny freedom of action. As with operations in the Soviet model, the distributed operation would take place throughout the depth and breadth of the theater of operations.

Just as the operation is the building block of the successive operations concept in the Soviet model, the distributed operation is the building block to the distributed campaign. Distributed campaigns are characterized as "...the integration of several simultaneous and successive distributed operations in a campaign."⁴⁵ Based on this definition it is evident that the distributed campaign is susceptible to the same type of "exhaustion" as the Soviet successive operations. The same limiting factors (logistics, sustainment, prolonged operations, resources, tempo, depth, breadth and duration) apply to both concepts. It is the assessment of these limiting factors that delimit the concept of operational durability.

The concept of durability applies to all levels of war. The focus here, however, is on the operational level of war and the operational art. Operational durability resides within the operational art concept. Interestingly, the word durable is rarely used when describing operational art. One sentence in the current U.S. Army DRAG edition of FM 3-0 Operations, dated 15 June 2000 makes the claim that U.S. Army forces are "inherently durable" when discussing their ability to conduct sustained land operations.⁴⁶ There is no mention in FM 3-0 of durability in the definition and discussion of operational art. The dictionary definition of durable is "...able to stand the effects of

time, especially wear and tear or decay; lasting."⁴⁷ Operational durability is the sustainability of an operational force throughout the entire depth and breadth of the theater of operations for an indefinite period of time. Based on an assessment of the operational art concept, the concept of operational durability is characterized by four elements. These are time, depth and breadth, sustainability, and the moral and material forces of a country.⁴⁸ An assessment of each of these elements yields a definition of operational durability and the establishment of criteria for operational durability.

Time is the first element of operational durability. Days, weeks, months and years are most commonly referenced in the concept of operational art. Time also includes derivative sub-elements of tempo, duration, and pause. Tempo is an element of operational design. It is "...the rate of military action."⁴⁹ Tempo is adjusted to maximize the military's ability to retain the initiative. Friendly tempo merely must exceed the enemy's ability to react, thus retaining friendly initiative. A rapid or high tempo operation could deplete resources quickly. Tempo is also relative to each level of war. An excellent illustration of tempo can be taken from the Persian Gulf war in 1991. Supplies were massed to support the operation, prior to the commencement of the ground war. Despite the fact that tremendous amounts of supplies were amassed, many units were out of critical supplies after only 100 hours of combat.⁵⁰ A high-tempo tactical battle will be viewed differently in the context of distributed operations or distributed campaigns. Finally, tempo links endurance and the resources of the force. Tempo is a consideration when designing an operation and assessing the capability of a force.

Duration is the second sub-element of time. Duration is the ability to continue or persist in the attainment of a goal.⁵¹ In distributed operations and distributed campaigns,

duration is measured in days, weeks, months and years. The average duration of a deep operation (as assessed by N.V. Ogarkov) post-Great Patriotic War was 15-20 days.⁵² The duration of distributed campaigns would be longer. Soviet military theorists realized that strategic success could not be reached through one operation. Thus the concept of successive operations and campaigns was developed. By nature, campaigns and operations require military endurance to facilitate the accomplishment of strategic objectives. Distributed campaigns are inherently exhaustive.⁵³ The Allies, specifically the United States and the Soviet Union, possessed endurance that achieved success during World War II. The ability to sustain the operation indefinitely is critical to the ultimate success of the operation and campaign.

The final sub-element of time is the concept of the operational pause. Operational pause is defined as "...a deliberate halt taken to extend operational reach or prevent culmination."⁵⁴ The operational pause is linked to the concept of tempo. Forces operating at a high tempo may need to take an operational pause in order to prevent culmination. The units participating in the Soviet Great Patriotic War had to pause after the 15-20 day duration of operations in order to consolidate combat power.

Depth and breadth comprise the second element of operational durability. The Soviet military theorists recognized the need to conduct and support operations throughout the entire theater of operations. During the Civil War, General Grant was able to facilitate strategic success because he was able to operate throughout the entire theater of operations. This is the essence of the concept of depth and breadth. The element of depth and breadth is comprised of three sub-elements. These are scope, command and control, and operational maneuver.

The first sub-element of depth and breadth is scope. Scope is a term that has implications for the size of operations. It includes breadth, depth, range, length and intensity of operations in an area. In developing the operational art theory, Soviet military theorists were aware of the potential enormity of the scope of the operations confronting them. Consequently they developed doctrinal concepts centered on large frontages, deep penetrations, and large operational formations. The sheer size of the Soviet Union forced Soviet military theorists to contemplate how to effectively conduct military operations in that environment. Triandafillov talked of penetrating 550-750 kilometers and occupying 2-300,000 square kilometers with a million man operating force for 10-12 weeks.⁵⁵ Another example of scope is provided by the Soviet operations in Manchuria against the Japanese in August of 1945. The 6th Guards Tank Army advanced over 820 kilometers (approximately 500 miles) into Manchuria in 10 days. Although virtually unopposed, planners at the outset of the operation had to plan for an opposed operation.⁵⁶

Intensity is a factor closely linked to scope. The ability to maintain intensity of combat operation over a period of time could be critical to the successful prosecution of the operation. Ammunition expenditures are frequently calculated in terms of the type of force encountered and the expected intensity of combat. The sub-element of scope is exemplified in a reflection on the German -Soviet operations during World War II. Fighting between them lasted continuously for almost four years. Operations from 1941 to 1943 stretched along a frontage that was never less than 2,400 miles. In late 1943, the frontage expanded to just over 3,000 miles. The German invasion thrust into 1,200 miles of Soviet territory and the Soviet counteroffensive stretched 1,500 miles to Berlin.⁵⁷

The second sub-element of depth and breadth is command and control. Nothing is more important than command and control at the operational level of war. The commander needs an effective communications system in order to control forces operating in an environment that is large in scope. The commander's ability to make decisions hinges on his ability to receive and process information. A reliable, rapid communications structure allows the commander to make decisions to counteract enemy actions. Without effective command and control, campaigns, major operations and operations would be impossible.⁵⁸

The final element of depth and breadth is operational maneuver. As previously defined, operational maneuver is the ability to maneuver throughout a theater of operations. Triandafilov felt that freedom of maneuver for a million-man army would be realized through enhancements in mobility technology.⁵⁹ Technology can indeed contribute significantly to a force's ability to retain freedom of maneuver. Tactical maneuver is the employment of forces through movement in combination with fires in order to achieve a positional advantage in respect to the enemy. This positional advantage will lead to mission accomplishment.⁶⁰ Operational maneuver expands this definition to include the overall freedom of action that forces the enemy into inaction and contributes to eventual operational success. Operational maneuver allows a force to seize and maintain the initiative. During the Civil War, General Grant used the concept of operational maneuver continually to ensure his freedom of action while denying freedom of action to the Confederates. Operational maneuver is significant to the concept of operational durability in that the ability to maneuver freely contributes to the ability of the force to operate throughout the depth and breadth of the theater of operations.

The third element of operational durability is sustainability. Sustainability is "...the ability to maintain the necessary level and duration of operational activity to achieve military objectives."⁶¹ The definition is very general. Sustainment is "...the provision of resources necessary to support operations until the mission is completed...which ensure continuing support throughout the duration of an operation."⁶² When considered within the operational art concept, four sub-elements of sustainability can be identified. These are operational logistics, resources and technology, continuous mobilization and reconstitution.

Operational logistics is the management of resources within a military theater of operations. It provides campaign sustainment in accordance with the operation-level commander's intent. Primarily concerned with the movement and sustainment of forces in the field, operational logistics must be continuous to be effective. Operational logistics begin as soon as the first vehicle and individual leave the home station for the theater of operations. The determination of operational logistics requirements before a campaign occurs is the essence of the art of supporting war.⁶³ An example of the importance of operational logistics is found in the Middle Don operation in the Soviet Union in 1942. Initially the Soviets were able to exploit success against the Germans. While pursuing their deep objective, however the Soviets became overextended. Units that had started the operation with 200 tanks had only 25 tanks towards the end of the operation. The inability of the Soviets to support the operations logistically allowed the Germans to regain the initiative and destroy the remaining Soviet tanks piecemeal.⁶⁴

The focus of operational logistics is getting required supplies at the right time in the right amount to support the campaign. Resources and technology make those supplies available. Resources include those assets on hand, those being produced, and those yet to be produced. Technology enhances the ability of a nation to procure, develop and distribute those resources. A nation must be able to sustain itself in a limited operation and it must be able to sustain itself indefinitely. Anything less than the ability for indefinite sustainment creates the inability to accomplish strategic goals. An interesting example of the significance of resources can be taken from the 1973 Arab-Israeli war. Both sides lost many combat systems quickly and had to turn to their respective superpowers (the U.S. and USSR) for additional resources. Ultimately the finite amount of resources forced the Arab and Israelis to heed the instruction of the sources of their support (the U.S. and USSR), forcing resolution of the conflict.⁶⁵ Resources were also ultimately the reason the allies prevailed in World War II.

Continuous mobilization is the third sub-element of sustainability. A country engaged in the type of protracted, prolonged conflict described by the operational level of war and the operational art concept must have the ability to continually mobilize its population in support of the conflict. Although strategic in nature, the ability or inability to mobilize the population will have effects at the operational level. In fact this capability will govern what can and (more importantly), cannot be accomplished by military power within a theater of operations.⁶⁶ This is not to say that a country must fully mobilize its material and population in every conflict to achieve strategic success. Not every operation conducted at the operational level of war will require full mobilization.

However, to be considered an operationally durable force the nation must maintain the ability to continuously mobilize the population if necessary.

The final sub-element of sustainability is reconstitution. Reconstitution refers to the ability of a force to regenerate, reorganize, replenish, and reorient itself for a new mission.⁶⁷ The concept can go beyond merely completing a mission and reorienting for another. Reconstitution could mean completing a mission and then redeploying to perform a completely separate mission. The ability to reconstitute is a source of adaptability that could save significant time in efforts to meet emerging threats. An example of reconstitution would be the military operations in Grenada in 1983. The 22d Marine Amphibious Unit conducted landing on Grenada in support of Operation Urgent Fury on 25 October 1983. After participating in combat operations, the 22d MAU reembarked aboard shipping and deployed to Beirut Lebanon to support the Marines after the barracks bombing.⁶⁸

The final element of operational durability is comprised of the moral and material forces of a country. This is the source of the art form that sets the concept of operational durability apart from the science of sustainment. It is the attitude of the nation and the nation's willingness to commit natural treasures to successfully accomplish strategic objectives. The moral forces of a country are those majority forces supporting the use of military power to facilitate the accomplishment of strategic objectives. Material forces are those human, natural, and material resources that are expended in the prosecution of a military operation. A country must be morally and materially willing to invest in and expend these resources to ensure successful accomplishment of strategic objectives. A country's moral and material capacity (and the perceived capacity from an adversary's

perspective) to wage war will significantly affect the desired strategic outcome. In Vietnam, the United States would not morally invest the required materials to achieve military success. The Soviet military theorist M. V. Frunze stated "...only when all forces and means of the enemy country were exhausted in the struggle, and when it was not able to continue armed opposition, only then could final victory over the enemy be counted on."⁶⁹

The operational durability concept and its four component elements make up the foundation to establish evaluation criteria for operational durability. These evaluation criteria are then applied to specific military force structures and doctrine to determine if the force analyzed is operationally durable. For this monograph, operational durability criteria includes: 1) the ability to conduct campaigns, major operations and operations indefinitely, over great depth and breadth, 2) the ability to conduct operational maneuver, and exploit success 3) sustainability of the forces indefinitely. Having established the criteria for operational durability, it is now necessary to review the doctrine and force structure of the United States Marine Corps so that its operational durability can be assessed.

United States Marine Corps Doctrine

The Marine Corps operates currently under its established doctrine of maneuver warfare. Since the mid-1990's the Marine Corps has been working to develop new doctrine that can accommodate future world change. In order to determine whether the Marine Corps is an operationally durable force, it is necessary to assess the current and future doctrine of the Marine Corps.

Current Marine Corps doctrine has its foundation in MCDP 1 Warfighting. Initially published in 1989, the manual continues to be the centerpiece of Marine Corps doctrine. The Marine Corps recognizes that warfare serve policy and two strategies to impose military force on our enemies. These are the strategy of incapacitation and the strategy of erosion. The strategy of incapacitation has the strategy of annihilation as its foundation. The Marine Corps recognizes that the physical destruction of the enemy (called for in the strategy of annihilation) is not required to achieve success. What is required is that the enemy is incapacitated as a viable military threat.⁷⁰ The strategy of erosion convinces the enemy to accept terms rather than resist, as further resistance would have military consequences.⁷¹

The Marine Corps employs these strategies across the spectrum of conflict. At one end are Military Operations Other Than War (MOOTW) which include peace operations and humanitarian operations (among others). At the other end is general war, which includes large-scale global conflict between major powers. The Marine Corps operates as a force-in-readiness, an expeditionary force that must react quickly in operations that cover this spectrum of conflict.⁷²

The Marine Corps recognizes the three levels of warfare within the spectrum of warfare and recognizes attrition and maneuver as principal types of warfare. Attrition warfare requires an overall superiority in attritional capacity, the ability not only to inflict but also to absorb attrition. The goal of maneuver warfare is to use strength against enemy weakness in order to maximize advantage.⁷³ Speed, surprise, firepower and attrition are important elements of maneuver warfare. Of these the Marines consider speed and focus to be very important. Superior speed allows Marines to seize the initiative and dictate the terms of action to the enemy. However, "...experience has shown that we cannot sustain a high rate of speed indefinitely. As a result a pattern develops: fast, slow, fast again."⁷⁴ Maneuver warfare is "...a warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope."⁷⁵

Interestingly, the Marine Corps recognizes the definition of operational art but does not use the term in MCWP 0-1 Marine Corps Operations or in its doctrinal publications. The Marine Corps does recognize the term campaign, and has a separate doctrinal publication that discusses campaigning (MCDP 1-2 Campaigning). In this publication, the definition and concepts used to describe campaigning are strikingly similar to the definition of operational art. The Marine Corps subscribes to the joint definition of a campaign. A campaign "...is a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space."⁷⁶ For Marines, campaigning "...reflects the operational level of war, where the results of individual tactical actions are combined to fulfill the needs of strategy."⁷⁷ In describing

campaigns and campaigning, the Marine Corps uses many of the concepts found in the definition of operational art. These include design, organization, integration, theater strategy, major operations and battles. Although the term operational art is not used in the Marine Corps, its description of campaigns and campaigning is synonymous with operational art.⁷⁸

For Marines, strategy drives operational and tactical action. Regardless of force size or scope of tactical action, if Marines are being used to achieve a strategic objective then they are operating at the operational level.⁷⁹ Marines believe that they are uniquely qualified to conduct operations at the operational level of war. This belief is founded in the inherent flexibility, modularity, and command and control of the MAGTF. The fact that there are separate headquarters for tactical control of ground, air and logistics actions allows the MAGTF command element to focus on the operational conduct of the war.⁸⁰ The operational Marine commander recognizes that strategy will provide resources in terms of personnel and material as well as resources that are less tangible (like political and public support for the operation).

Determining the resources required for a campaign is accomplished by phasing the campaign. Phasing of the campaign "...must take into account the process of logistical culmination."⁸¹ If resources are insufficient to accomplish the mission, then sequential phasing must occur or the MAGTF must take an operational pause to build up resources. For the MAGTF conducting a campaign, resource availability "...depends in large part on time schedules--such as sustainment or deployment rates--rather than on the events of war."⁸² An aspect of resourcing that is important to the Marines is reconstitution. As a naval expeditionary force, the ability to reconstitute after a mission and move on to the

next task is essential. Reconstitution refers to the ability of an expeditionary force to "...regenerate, reorganize, replenish and reorient itself for a new mission after employment elsewhere without having to return to home base."⁸³

While all services are capable of expeditionary operations, the Marine Corps (through its force structure) is uniquely and specifically tailored for expeditionary operations. An expedition is "...a military operation conducted by an armed force to accomplish a specific objective in a foreign country."⁸⁴ The projection of force into a foreign setting implies that the operation will be temporary in nature and the force will operate under austere conditions with organic support. As such, MAGTFs are tailored to deploy with supplies necessary to sustain the force until reinforcements arrive.⁸⁵ As required, temporary support structure is subsequently developed to sustain the operation to its conclusion. Expeditionary by nature, the Marine Corps has a requirement to conduct forcible entry by amphibious assault. The capability to self-sustain and temporarily force sustain such operations is imperative.

The Marine Corps also recognizes the need to be able to conduct sustained operations ashore. Throughout its history the Marine Corps has participated in sustained land campaigns. Recent examples include Vietnam and the Persian Gulf War. During sustained operations ashore, MAGTFs are best employed in operational missions as independent formations. This independent employment leverages the capabilities of a self-contained, self-sustaining combined arms force with both an air and ground capability. Appropriate missions for Marines deployed ashore include advance force, covering force, enabling force operations, independent supporting attacks, and employment as operational reserve or an operational maneuver element.⁸⁶

Evolving Marine Corps doctrine focuses on the capstone concept of Operational Maneuver from the Sea. OMFTS is an amphibious operation that uses the sea as an avenue for maneuvering against an operational level objective.⁸⁷ The Marine Corps assessment the future provides the basis for OMFTS. For Marines, conflict will arise out of "chaos in the littorals." Increasing urbanization of populations combined with the increasing trend of population-center movement to coastal areas provides the foundation for the eventual chaos. The Marines' view of future struggle includes the US versus the "...demons of crime, population pressure, environmental degradation, disease and culture conflict."⁸⁸ Future crisis will fall into three categories: disasters, disruptions and disputes. The Marine Corps recognizes fragmentation and integration as the two main forces that are driving this future view of the world.

Fragmentation is the breakup of multinational states into smaller nation groups. Integration refers to the increasing integration of the global economy.⁸⁹ Population factors and geography play heavily in the Marine Corps' assessment. Marines believe that populations will continue to increase in under-developed regions. These regions include Asia, Latin America, and Africa. As the populations increase they will be comprised primarily of youths that are generally less productive members of society. As such, the youths will be more prone to disruptive behavior. This assessment highlights the importance of the sea and the ability to influence littoral areas.

The Marine Corps recognizes that a major regional contingency may occur. Although unlikely, such an incident would, "...involve among other things, intense conventional combat with advanced weaponry and large military formations. Such a conflict could be protracted and would likely involve a period of mobilization and

deployment of forces."⁹⁰ This unlikely (yet possible) scenario has forced the Marine Corps to assess whether OMFTS can develop into sustained operations ashore. Under emerging OMFTS doctrine the Marine Corps continues to recognize that they must be prepared to conduct sustained operations ashore. It is currently unclear whether or how OMFTS and sustained operations ashore will be linked. Existing doctrine continues to recognize potential adversaries as large massed forces operating linearly. OMFTS predicts a non-linear, non-contiguous battlespace lacking large targetable formations.⁹¹

There are two elements of OMFTS, "operational maneuver" and "from the sea." Principles of OMFTS include the focus on an operational objective, the sea as maneuver space, the use of overwhelming tempo and momentum, pitting strengths against weaknesses, an emphasis on intelligence deception and flexibility, and the integration of organic, joint and combined assets.⁹² The reliance on the sea for maneuver distinguishes OMFTS from the traditional forms of operational maneuver. Through the use of the sea, Marines will retain freedom of movement, giving the unimpeded ability to project power throughout an area of operations.

The majority of aviation, logistics and MAGTF command and control assets will remain sea-based. The Marine Corps believes that future technology will enable fire support and logistics support to be conducted primarily from platforms at sea. Reduced logistic requirements will reduce the need to establish supply facilities ashore. A smaller logistics tail will enable forces to conduct ship to objective maneuver (STOM) and rapid reembarkation.⁹³ The ability to project power from the sea to specific objectives with impunity will capitalize on surprise, speed and shock and facilitate mission success. The

Marines cite the example of the capture of Seoul during the Korean War as a classic example of OMFTS.⁹⁴

Critical to OMFTS doctrine are sea-based logistics. Sea-based logistics provide the concept for operational and tactical sustainment of forces operating from the sea. Sea-based logistics are comprised of five tenets. These are the primacy of the sea, reduced logistical demand, in-stride sustainment, adaptive response and joint operations, and force closure and reconstitution at sea.⁹⁵ OMFTS will maintain an intermediate level maintenance capability, while depot level maintenance will continue to be conducted in the United States.⁹⁶ The concept of sea-based logistics requires five essential future operational capabilities. They are ship to objective logistics, selected offload, strategic logistics interface, sea-based intermediate maintenance, and joint interoperability.⁹⁷

Current Marine Corps doctrine focuses on maneuver warfare, while OMFTS focuses on operational maneuver and movement from the sea. With these doctrinal concepts in mind, we can now consider whether or not the Marine Corps is an operationally durable force and whether it will be an operationally durable force in the future.

Analysis

Operational durability is the indefinite sustainability of an operational force throughout the entire depth and breadth of a theater of operations. Operational durability is characterized by four elements time, depth and breadth, sustainability and the moral and material forces of a country. For this analysis the operational durability criteria are: 1) the ability to conduct campaigns, major operations and operations indefinitely, over great depth and breadth, 2) the ability to conduct operational maneuver, and exploit success 3) sustainability of the forces indefinitely. Each of the three MAGTFs (MEU, MEB and MEF) will be assessed against these criteria. The analysis evaluates these criteria with regard to current and OMFTS doctrine. Current Marine Corps doctrine and structure will be analyzed first.

The Marine Expeditionary Unit (Special Operations Capable) (MEU (SOC)) is the smallest (approximately 2,200 sailors and Marines) of the MAGTFs that the Marine Corps identifies doctrinally. Often called the "jewel" in the Marine Corps crown, the MEU (SOC) is the standard forward-deployed expeditionary organization. When evaluating the MEU (SOC) against the first criteria, it is important to understand that the Marine Corps recognizes that the MEU (SOC) can operate at the operational level to achieve strategic results.⁹⁸ Additionally, it is important to understand that while operating independently, the MEU (SOC) is actually operating as part of a naval expeditionary force. The Amphibious Ready Group (ARG) consists of the appropriate number of ships needed to transport and sustain the MEU (SOC) while operating at sea and ashore. While not deploying with the ARG, a Carrier Battle Group (CVBG) organized around an aircraft carrier can be tasked to support the ARG as part of a naval

expeditionary force. For the purposes of this monograph, the MEU (SOC) will be defined as the MEU (SOC) and the associated ARG.

By literal definition, the MEU (SOC) can participate in a campaign. The MEU (SOC) can also participate in major operations and battles. In the doctrinal definition of campaigns and major operations there is no reference made with regard to the size of participating forces.⁹⁹ Size is, however, alluded to in the discussion of the campaign (Operation Desert Storm) and major operations (the attack by Third Army).¹⁰⁰ It is clear that the Soviet operational art theorists also recognized that the size of forces was relevant to the concept of the campaign and major operations. By implication, the MEU (SOC) cannot conduct a campaign or major operation. Additionally the Marine Corps acknowledges the MEU (SOC)'s limited forcible entry capability. The MEU (SOC) can participate at the operational level of war and can conduct operations.

Although an argument can be made that the MEU (SOC) can operate over great depth and breadth, this argument is not very realistic. The possession of organic fixed and rotary wing aircraft gives the capability to operate over great depth and breadth. These operations are, however, limited in scope, intensity, command and control, and endurance. Overall, however the MEU (SOC) does not satisfy the requirements for the first criteria.

Evaluating the MEU (SOC) against the second criteria, the MEU (SOC) does maintain a significant operational maneuver capability. Using the sea and organic aircraft for operational maneuver allows freedom of maneuver. The MEU (SOC) can conduct operational maneuver in the air, on land and on the sea. Helicopters facilitate airborne maneuver, Amphibious Assault Vehicles (AAVs) and rubber boats provide an

"over the water" capability, and boots and vehicles provide the land capability. These assets provide the MEU (SOC) the ability to seize and maintain initiative, essential aspects of freedom of maneuver. These assets can arguably force an enemy into inaction thereby denying his freedom of action. The size of the enemy force, however, is an important consideration. A regiment or brigade sized force may not be intimidated by the mobility and maneuver capabilities of the MEU (SOC).

The size of the MEU (SOC) also impacts its ability to exploit success. Arguments can be made both ways, that the MEU (SOC) has an ability to exploit success and that the MEU (SOC) does not have the ability to exploit success. These arguments center on the ability of the MEU (SOC) to exploit success in combat operations. Taken in the context of operational art as defined by the soviet military theorists, the MEU (SOC) can tactically exploit success, but cannot operationally. Arguably, given the right set of circumstances, the MEU (SOC) could exploit success operationally in a MOOTW environment. This evaluation, however, is outside the scope of this monograph. Although the MEU (SOC) can conduct operational maneuver, it's ability to exploit operational success is limited. Consequently the MEU (SOC) does not satisfy the second criteria for operational durability.

An evaluation of the MEU (SOC) against the third criteria sustainability reveals that although the MEU (SOC) maintains a significant sustainment capability, it does not satisfy this criteria for operational durability. Undoubtedly operational logistics, resources, and continuous mobilization could be procured to support the MEU (SOC). Additionally, the force has the ability to reconstitute effectively (demonstrated by 22d MAU during operations in Grenada and Lebanon in 1983). Once again, however, the

size of the force and the purpose of the force provide arguments as to why the MEU (SOC) does not satisfy this criteria. The MEU (SOC) provides the United States continual forward presence and crisis response. It was designed to be tactically sustainable, and arguably could be operationally sustainable under the right circumstances. This, however, is not the purpose of the MEU (SOC). If operational durability is required, additional and/or replacement forces are introduced. The example again is Grenada. 22d MAU reembarked, redeployed, and reconstituted after additional Army assets flowing to the island replaced them.¹⁰¹ The MEU (SOC) is not intended to be a long duration force. Consequently, the MEU (SOC) does not satisfy the third criteria for operational durability and cannot be considered an operationally durable force.

The second MAGTF force structure under current Marine Corps doctrine analyzed is the Marine Expeditionary Brigade (MEB) with approximately 14,000-18,000 Marines and sailors. Although tailorable, the Marine Corps currently recognizes three MEB command structures. When conducting amphibious operations, the MEB (like the MEU (SOC)), is associated with corresponding amphibious shipping. This association is constrained by the amount of amphibious shipping available. The Navy currently maintains a limited amount of amphibious shipping. The Maritime Prepositioning Forces (MPF) squadrons offset this lack of shipping. MEB's are the smallest MAGTF designed for link-up with the MPF assets. MEB's have the ability to deploy by amphibious shipping or by marrying up with one of the three associated MPF squadrons. Regardless of how the MEB gets to the fight, just like the MEU (SOC) it is generally associated with a CVBG. For the purpose of this monograph, the MEB is defined as an amphibious force

(embarked at sea) or associated with an MPF squadron, deploying by air and linking up with their equipment in theater.

Just as the MEU (SOC) can participate in a campaign, so can a MEB. MEB's can also participate in major operations and battles. The MEB maintains a forcible entry capability, and is much larger in size than the MEU (SOC). Although the MEB could be a participant in a campaign or major operation, its ability to conduct a campaign (when assessed against the Soviet theorists' concept) is doubtful. The size of the force and the command structure of the force are the key contributing factors to this limitation.

The MEB (using its on hand sustainment capability) can conduct operations over time. Flowing additional MPF assets to support a MEB extends the tempo and duration of the operation. At some point the MEB would have to conduct an operational pause, but, based on the situation could arguably sustain itself indefinitely.

Like the MEU (SOC), the MEB can operate over great depth and breadth. Possessing a more robust Ground Combat element (GCE), Aviation Combat Element (ACE) and Brigade Service Support Group (BSSG), the MEB potentially can operate throughout a significant portion of the theater of operations. Again like the MEU (SOC), however, these operations are likely to be limited in scope, intensity, command and control and endurance. This is not to say that the MEB is incapable of operating in high intensity situation. Indeed, the MEB is designed to participate in high intensity combat for a period of time. Amphibious assault by its nature is a high intensity operation. The endurance to maintain such an operation in an enduring situation would tax the MEB's command and control structure. This analysis is again based on the assumption that the MEB is operating "alone." Consequently, although the MEB maintains a robust combat

capability, its ability to conduct operations over great depth and breadth indefinitely is questionable. Thus, the MEB does not satisfy the requirements for the first criteria for operational durability.

In evaluating the MEB against the second criteria, it is clear that the MEB maintains a clear ability to conduct operational maneuver. For the MEB, the ability to conduct operational maneuver provides the freedom of action required to conduct maneuver warfare. Depending on the size of the enemy force, the MEB's freedom of maneuver could stifle the enemy's ability to maneuver, forcing the enemy into inaction. If, however, the enemy maintains a force that is equal to or larger than the MEB, the MEB arguably may not have the desired freedom of maneuver. Additionally the ability to conduct operational maneuver against a same size or larger enemy force will potentially constrain the MEB's ability to exploit success. Consequently, although the MEB possesses a significant capability to conduct operational maneuver, this does not satisfy the second criteria for operational durability.

Analyzing the MEB structure against the third criteria reveals that the MEB could sustain itself indefinitely. The operational logistic capability that the MEB brings to the fight is significant. The force is designed to be deployable and sustainable. The MPF capability (when tied to MEB operations) greatly enhances the MEB's ability to operate indefinitely. The Marine Corps would continuously mobilize to support the MEB for the required duration of the operation. Amphibious and MPF shipping give the MEB a unique ability to reconstitute forces, as the situation requires. Designed as a forcible entry force, the MEB maintains and can potentially develop the structure necessary to sustain its forces indefinitely. Thus, the MEB satisfies the third criteria for operational

durability. Although this criteria is satisfied, the fact that the first two criteria are not satisfied indicates that the MEB should not be considered an operationally durable force.

The final MAGTF to be assessed under the current doctrinal structure is the Marine Expeditionary Force (MEF) of approximately 45,000 sailors and Marines. The largest of the three MAGTFs, the MEF maintains significant capabilities. The MEF is the principal warfighting organization of the Marine Corps, capable of participating in amphibious operations and sustained operations ashore.¹⁰² The Marine Corps recognizes the fact that it will most likely operate as part of a joint force, however, the Marine Corps also recognizes that the MEF may be the first substantial force available during a crisis.¹⁰³ For the purpose of this monograph, the MEF is defined as the force itself with its associated amphibious and MPF shipping.

In analyzing the MEF against the first criteria for operational durability it is clear that the Marine Corps recognizes the campaigning concept and realizes that its principal contribution to the campaign will be the MEF.¹⁰⁴ MEF's definitely can conduct and participate in campaigns, major operations and operations. The MEF has the ability to conduct campaigns and major operations over time. The Marine Corps specifically addresses the concept of tempo in MCDP 1-2, Campaigning.¹⁰⁵ Based on structure, MEF's are able to participate in campaigns for the duration of the campaign. The MEF has the same unique on-hand sustainment capability found in the other two MAGTFs. This sustainment capability satisfies the need found in the requirement for the MEF to be able to conduct amphibious assault and forcible entry operations.

The MEF maintains the ability to operate in the air on the land and on the sea throughout the depth and breadth of the theater of operations. Its organic aviation assets

enable the Marine Corps to conduct and sustain operations in depth and breadth throughout theater. Despite the fact that the preponderance of the MEF's combat power is in the form of light infantry does not negate the fact that the MEF can readily project combat power throughout the depth and breadth of the theater. The MEF maintains lift assets for the infantry, however, these lift assets are not as comprehensive as those found in a pure mechanized force. The doctrine of maneuver warfare does not require the ability of the infantry be highly mobile. Maneuver warfare doctrine does require the Marines to possess the ability to employ combat power throughout the theater at the decisive place and time. The MEF is suited to accomplish this doctrinal task. This ability to project combat power is consistent with the concepts developed by the Soviet military theorists.

The MEF maintains sizeable command and control structures in each of the four elements of the MAGTF. This capability enables comprehensive, redundant command and control functionality required by large-scale military operations. The MEF also possesses the endurance required to participate in sustained expeditionary operations and sustained operations ashore. The MEF has the inherent staying power necessary to dominate the enemy for as much time as necessary to accomplish the mission. The MEF has the ability to conduct a series of successive operations indefinitely using its organic assets during the campaign. The MEF therefore does satisfy the requirements for the first criteria for operational durability.

The MEF also satisfies the second criteria for operational durability. The power, flexibility and responsiveness of the ACE provides an organic capability that enables operational maneuver. Naval shipping and organic amphibious assets provide a sea-

borne operational maneuver capability. These assets combined with the GCE allow the MEF to conduct operational maneuver, ensuring their freedom of action. These capabilities enable the MEF to confront an enemy force equal to or larger in size. Capitalizing on maneuver warfare doctrine and the use of combined fires denies the enemy the freedom of maneuver he desires. By denying the enemy his freedom of action the MEF has the capability to readily exploit success. Thus the MEF satisfies the second criteria for operational durability.

The MEF also satisfies the final criteria of sustainability. Operational logistics are critical to the sustainment of the MEF campaign. Logistically, the Marine Corps recognizes that it is required to sustain the current, planned and future fights.¹⁰⁶ The expeditionary nature of the MEF structure requires that deployment and sustainment figure prominently in its employment.¹⁰⁷ The concept of reconstitution is also addressed in Marine Corps doctrine. The Marine Corps recognizes the need to regenerate combat power once it has been expended.¹⁰⁸ By its nature the deployment and employment of the MEF require the augmentation of the Marine reserve forces. This augmentation facilitates the concept and structure of continuous mobilization. The Persian Gulf War provides an example of the MEF's ability to deploy initially as an expeditionary force and subsequently as a sustained force ashore. In this conflict the Marine Corps and I MEF were prepared to participate in a campaign indefinitely. This example itself satisfies the requirement of the third criteria for operational durability.

Accordingly, analysis of the current doctrinal employment of the MEU (SOC), MEB, and MEF structures against the concept of operational durability yields the following conclusions. Both the MEU (SOC) and the MEB are not operationally durable forces.

These small expeditionary units are tailored in size to meet rapid response requirements levied on the Marine Corps by the National Command Authority (NCA). The MEF is an operationally durable force. The larger size of the MEF with its expanded command and control structure, logistics, and aviation element give it the ability to meet these criteria for operational durability. Analysis shows that the concept of operational durability is embedded in current Marine Corps doctrine although not formally recognized.

The same three force structures (MEU (SOC), MEB and MEF) will now be analyzed against the future doctrinal concept of OMFTS. The same definitions established in previous analysis as to the size and composition of the structures remains constant for the OMFTS analysis. These definitions include the assumptions that each of the MAGTFs would operate with their associated amphibious and MPF shipping assets.

It is important to understand the concept of sea-based logistics when considering whether the MEU (SOC) is an operationally durable force under the OMFTS doctrine. The OMFTS doctrine places increased emphasis on the ability of the MAGTF to sustain itself from sea. This reliance on sea-based support reduces the requirement to establish and sustain large logistic facilities ashore. Technology is vital to the development of this concept. It is assumed that future forces will be less logistically constrained in the future, allowing them to be wholly resourced from the sea.

When considering the OMFTS MEU (SOC) against the first operational durability criteria, many of the same arguments made in the previous analysis apply. The OMFTS MEU (SOC) structure is the same as the current doctrinal structure. Although able to participate in campaigns, major operations and operations, the OMFTS MEU (SOC) is

primarily designed as a forward deployed, expeditionary presence or force. It is not designed as a forcible entry force that is sustainable ashore indefinitely.

Similarly, arguments can be made that the OMFTS MEU (SOC) can operate over great depth and breadth. In fact given the sea-based sustainment capabilities of the future force, a more compelling argument can be made that the OMFTS MEU (SOC) is adept at operating throughout the depth and breadth of a theater. Using the sea to facilitate maneuver and sustainment actually expands the potential depth and breadth of the theater. Similar limitations arise, however in scope, intensity, command and control and endurance. Future technology may enhance command and control abilities, and endurance qualities of the OMFTS MEU (SOC), however the force still does not fulfill the needs as envisioned by the Soviet military theorists. Although the OMFTS MEU (SOC) will ultimately be more efficient and enhanced, it still fails to satisfy the first criteria for operational durability.

Analysis of the second criteria for operational durability leads to similar conclusions. When realized, the OMFTS MEU (SOC) will have a significant operational maneuver capability. Technology will allow rapid over-the-horizon force mobility. Rapid ship to objective sustainment will be realized. Although these qualities may guarantee our own freedom of maneuver, they may not prevent the enemy from exercising his. Additionally the OMFTS MEU (SOC) will encounter similar problems as the current MEU (SOC) in exploiting success. The size of the opposing force is a significant limiting factor. Assessments claim that in the future a 2,000-man force will be capable of defeating a 10-20,000-man force.¹⁰⁹ It is unclear at this time if and when this goal will be realized.

Until such time the analysis is that the OMFTS MEU (SOC) does not satisfy the second criteria for operational durability.

The OMFTS MEU (SOC) falls short satisfying the third criteria for operational durability as well. Size again plays an important role in this determination. Although future technology may very well expand the capabilities of the OMFTS MEU (SOC), the size of the force limits its' ability to operate indefinitely. Before OMFTS can be realized, interim methods of amphibious assault must be developed. These methods will include the need for "traditional" amphibious assault combined with durable sustainment ashore.¹¹⁰ The transformation from land-based to sea-based logistics will require a revolution in logistic functions and applications.¹¹¹ Until this transformation occurs, the ability of the OMFTS MEU (SOC) to sustain itself indefinitely is suspect. Consequently the OMFTS MEU (SOC) does not satisfy the third criteria for operational durability and cannot be considered an operationally durable force.

Like the current MEB, the OMFTS MEB has the ability to participate in campaigns major operations and operations. Similarly, the OMFTS MEB has limitations when analyzed against the first criteria of operational durability. The OMFTS MEB can conduct operations over time and for extended duration. An argument could be made that leveraging technology the OMFTS MEU (SOC) might be able to successfully defeat a considerably larger force. The same argument could be made for the OMFTS MEB. Technology might also enhance the capabilities of the OMFTS MEB in terms of command and control and sustainment. Given these advancements an argument can be made that the MEB could participate in campaigns and major operations indefinitely, and over great depth and breadth.

The size of the OMFTS MEB, however, realistically limits its ability to operate over great depth and breadth indefinitely. The OMFTS MEB may be technologically enhanced, but it faces the same constraints as the current MEB. Operating alone for an extended duration would tax the OMFTS MEB. Certainly the duration could be a long time, but could not be indefinite. Technology may bring significant improvements to existing capabilities but technology alone will not provide a panacea for the OMFTS MEB. Until specific capabilities are identified, it is difficult to assert that the OMFTS MEB satisfies the first criteria for operational durability.

Evaluating the OMFTS MEB against the second operational durability criteria reveals that the OMFTS MEB will probably have an enhanced ability (through the use of technology) to conduct operational maneuver. Indeed these enhancements may actually serve to facilitate and hasten the exploitation of successful operations. It is difficult to assess the capabilities of the technology when the concepts and technology are not fully developed. Technology might very well enable the OMFTS MEB to retain freedom of action while denying the enemy his freedom of action. Additionally, technology might also allow the OMFTS MEB to readily exploit success. In the absence of this information, however, it is difficult to assert that the OMFTS MEB fulfills the requirements for the second criteria for operational durability.

The OMFTS MEB would in the near future have a difficult time satisfying the requirements for the third criteria for operational durability. The OMFTS MEB encounters difficulties sustaining the force just like the OMFTS MEU (SOC). Ongoing analysis recognizes this current shortfall, and has made assumptions that OMFTS forces will receive sustainment from joint assets operating ashore.¹¹² The bottom line is that

assets needed fully to provide sea-based logistics are currently unavailable with no future procurement contemplated. If the assets required for sea-based logistics are insufficient for the OMFTS MEU (SOC), then they are (logically) insufficient for the larger OMFTS MEB. Thus the OMFTS MEB fails to satisfy the third criteria for operational durability, and cannot be considered an operationally durable force.

The OMFTS MEF retains its status as the principal warfighting unit in the future Marine Corps. It has the ability to participate in campaigns, major operations and operations indefinitely over great depth and breadth. The OMFTS MEF will not see a reduction in capability, but an enhancement in capability. The ability to maintain tempo and operate for duration is maintained. The scope of operations, command and control and endurance will still be available. The OMFTS MEF continues to satisfy the first criteria for operational durability.

The OMFTS MEF also maintains its ability to satisfy the second criteria for operational durability. It will, at a minimum, maintain its ability to conduct operational maneuver and exploit success. These on-hand capabilities will not go away. Future technology will certainly enhance the capabilities of the OMFTS MEF in the area.

Finally, the OMFTS MEF will continue to be able to sustain itself indefinitely. The sheer scope of seabasing logistics for an OMFTS MEF sized force is unrealistic. The OMFTS MEF will have to maintain a capability to conduct operational logistics in the traditional manner. This traditional logistical structure will be enhanced by any technological developments that occur. Consequently, the OMFTS MEF continues to satisfy the third requirement for operational durability, and continues to be an operationally durable organization.

Conclusions

The concept of operational durability has important ramifications for our military forces. To discount the need for a country to maintain a future operationally durable force is unwise. In the future the NCA may relinquish the requirement to conduct two simultaneous Major Regional Contingencies (MRC's). This action does not rescind the requirement for operational durability. History has repeatedly demonstrated that predicting future conflict is very difficult, if not impossible. Preparation for potential eventualities, however, is prudent. Technology may very well contribute to the efficiency of modern military forces. These future forces may be able to do more with less. These forces must be able to operate as part of a joint or combined team. They must still be assessed with regard to their operational durability.

Throughout this analysis, however, the size of the force remained a critical limiting factor. The need for a military force to be able to grow in size as required is important. Perhaps maintaining a large standing military force is not required. The ability to mobilize the resources of the nation, remains a critical requirement. The requirement for continuous mobilization, duration and endurance as sub-elements of operational durability will never go become obsolete.

At some point, technology may enable the size of military forces to decrease while maintaining former capabilities. The Marine Corps recognizes the concepts of attrition and maneuver warfare. This recognition forces the Marine Corps into a force structure that balances the requirements for quality and quantity. The goal today is to manifest qualitative forces in terms of technology, tactical proficiency and maneuver warfare (exploiting enemy weakness). This qualitative advantage alone may be insufficient to

force decisive results in the operational environment. Quantity will always remain a requirement for successful attrition warfare.¹¹³

The fact that the MEU (SOC) and the OMFTS MEU (SOC) are not operationally durable is not important. They are not designed to be an operationally durable force. They must be tactically durable, responsive, and mobile, but not necessarily operationally durable. The style of warfare these units wage is linked to their logistic capabilities.¹¹⁴ That style of warfare does not require operational durability.

Someday a MEU or a MEB may be as operationally durable as a MEF. Foreseeable technology is not sufficient to compensate small size of the MEU and the MEB to make them operationally durable. Shortcomings persist in the development of sea-based logistic platforms and delivery systems. The requirement for a "massive evolution " of logistics has been identified.¹¹⁵ Until these deficiencies are resolved, the MEU and the MEB will have operational durability deficiencies. Although the analysis in this monograph assessed the MEB's ability to operate alone, the trend in the future is to operate in a joint and combined arena. In this scenario a MEB operating with an Army Interim Brigade Combat Team (IBCT) and an Air Expeditionary Force (AEF) may be able to conduct a sustained campaign indefinitely. Leveraging technology might enable the future MEU or MEB to accomplish everything the current MEF can accomplish.

This monograph determined that the MEB and the OMFTS MEB could not be considered operationally durable forces. This determination has ramifications for the U.S. Army and its desire to pursue the IBCT and Interim Division concepts. Although the IBCT and the MEB possess different force structures, (the IBCT does not have organic fixed wing aviation or a forcible entry capability) similar conclusions may nonetheless be

drawn. Operating independently or as part of a multi-IBCT force will require a careful assessment to determine whether the IBCT is operationally durable. Analysis has already demonstrated that sustaining a 4,000-man Armored Cavalry Regiment (ACR) for seven days using an OMFTS model was neither "feasible or advisable."¹¹⁶

Although close to being operationally durable, both the MEB and OMFTS MEB were not considered operationally durable. An in-depth assessment of this deficiency would reveal how to make the current and OMFTS MEB's operationally durable. A similar assessment should occur with the IBCT. These assessments should include an evaluation of the requirement for air and naval superiority. In the absence of air and naval superiority sea-based, aviation delivered logistics will be compromised.¹¹⁷

For the OMFTS MEF, sea-based logistics cannot deliver multiple "divisions over the beach."¹¹⁸ If this is true, the question becomes: How large a force is sustainable under the OMFTS concept? The follow on to this question is: How operationally durable is that force? The Marine Corps was concerned about the durability of the MEF during the Persian Gulf War. With over 60 percent of the Marine Corps operationally deployed, the Marine Corps still had to provide forces to a second MRC if required. This second MRC requirement (combined with the I MEF operational durability concerns) during the war undoubtedly impacted the decision not to conduct an amphibious assault into Kuwait. Durability will remain a requirement in future conflict. Force size will continue to be a critical factor in evaluating durability.

If the Marine Corps' assessment of future conflict is correct, the Marine Corps must continue to maintain a principal MAGTF that is operationally durable. That structure is the MEF. Arguably, future conflict is becoming more complex. This requires that the

Marine Corps be able to participate in protracted, successive campaigns and operations.

The MEF can currently accomplish this task and must remain able to do so in the foreseeable future.

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